

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: MOUNTAIN BROOK RESERVOIR	Lake Area (ha):	44.52
Town: JAFFREY	Maximum depth (m):	3.4
County: Cheshire	Mean depth (m):	1.0
River Basin: Merrimack	Volume (m ³):	466000
Latitude: 42°48'10" N	Relative depth:	0.4
Longitude: 72°02'20" W	Shore configuration:	3.47
Elevation (ft): 1015	Areal water load (m/yr):	25.32
Shore length (m): 8200	Flushing rate (yr ⁻¹):	24.20
Watershed area (ha): 1936.8	P retention coeff.:	0.45
% watershed ponded: 3.9	Lake type:	natural w/dam

BIOLOGICAL:

2 March 1994

14 September 1993

DOM. PHYTOPLANKTON (% TOTAL)	#1	DINOBYRON 85%	DINOBYRON 55%
	#2		CHRYSPHAERELLA 40%
	#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)			365
CHLOROPHYLL-A (µg/L)			3.46
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 30%	KERATELLA 35%
	#2	SYNCHAETA 30%	NAUPLIUS LARVA 23%
	#3		POLYARTHRA 15%
ROTIFERS/LITER		17	316
MICROCRUSTACEA/LITER		<1	207
ZOOPLANKTON ABUNDANCE (#/L)		20	523
VASCULAR PLANT ABUNDANCE			Abundant
SECCHI DISK TRANSPARENCY (m)			2.8 Visible on bottom
BOTTOM DISSOLVED OXYGEN (mg/L)		6.1	8.7
BACTERIA (E. coli, #/100 ml)	#1		< 10
	#2		< 10
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m³) : None
Anoxic volume (m³) : None

CHEMICAL:

Lake: MOUNTAIN BROOK RESERVOIR
Town: JAFFREY

	2 March 1994		14 September 1993		
DEPTH (m)	1.5		1.5		
pH (units)	5.7		6.4		
A.N.C. (Alkalinity)	2.1		2.7		
NITRATE NITROGEN	0.07		< 0.02		
TOTAL KJELDAHL NITROGEN	0.17		0.17		
TOTAL PHOSPHORUS	0.006		0.016		
CONDUCTIVITY (μ mhos/cm)	81.3		73.4		
APPARENT COLOR (cpu)	42		33		
MAGNESIUM			0.72		
CALCIUM			2.4		
SODIUM			9.1		
POTASSIUM			0.59		
CHLORIDE	16		15		
SULFATE	7		5		
TN : TP	40		11		
CALCITE SATURATION INDEX			4.1		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1993

D.O. S.D. PLANT CHL TOTAL CLASS

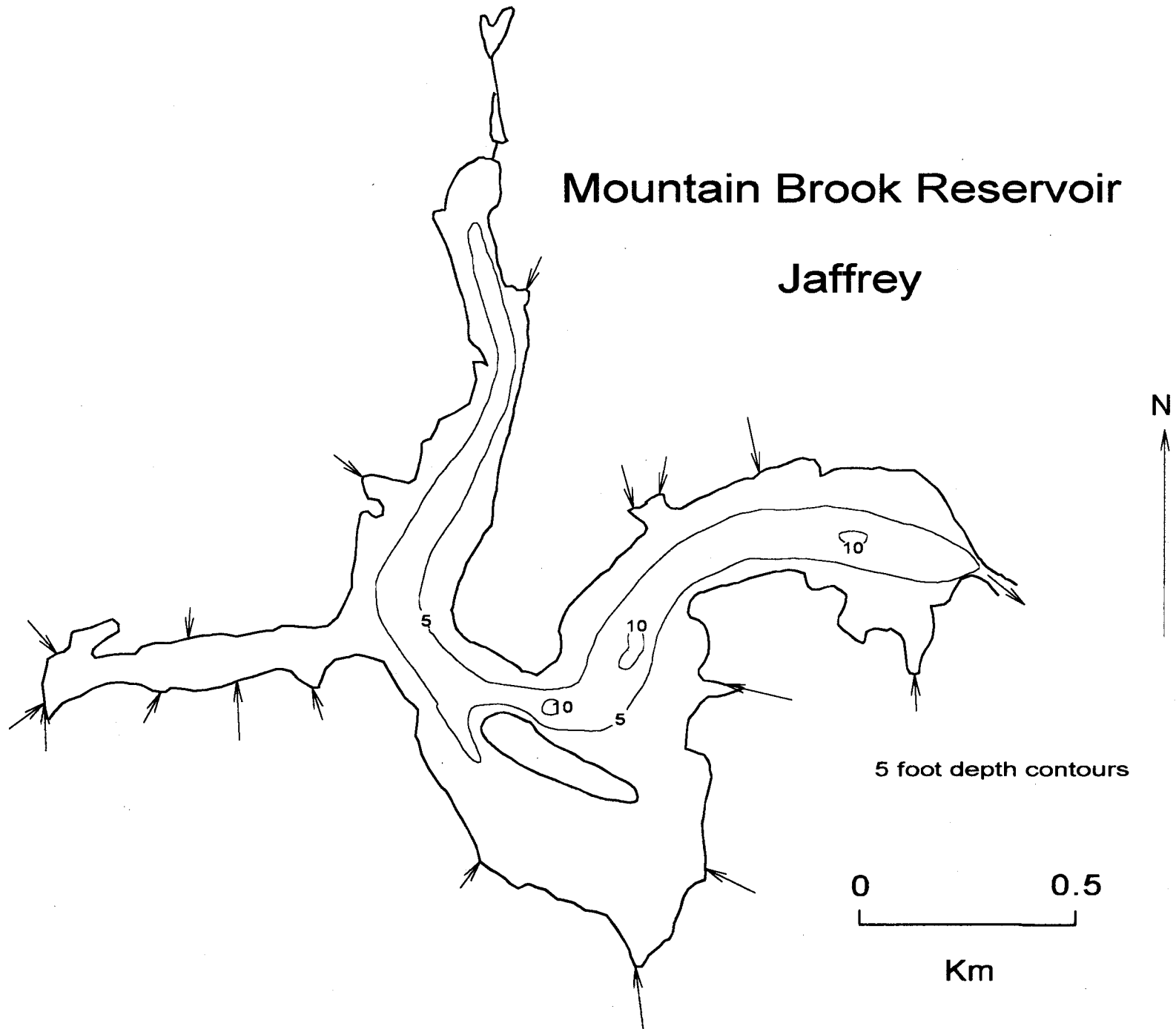
**	2	5	0	7	Meso.
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COMMENTS:

1. This is a man-made impoundment on Mountain Brook. Prior to the impoundment, much of the now flooded area was a wetland called "Dead Swamp". It is now also known as Red Mill Pond.
2. At one time this reservoir was considered as a potential future public water supply for the Town of Jaffrey. The town has now abandoned that idea and is exclusively using groundwater as its source of public water.
3. Wholewater phytoplankton was dominated by Cryptomonas (45%) and Mallomonas (25%).

Mountain Brook Reservoir

Jaffrey



111-174

FIELD DATA SHEET

TOWN: JAFFREY

WEATHER: SUNNY & BREEZY; WARM-LOW 80'S

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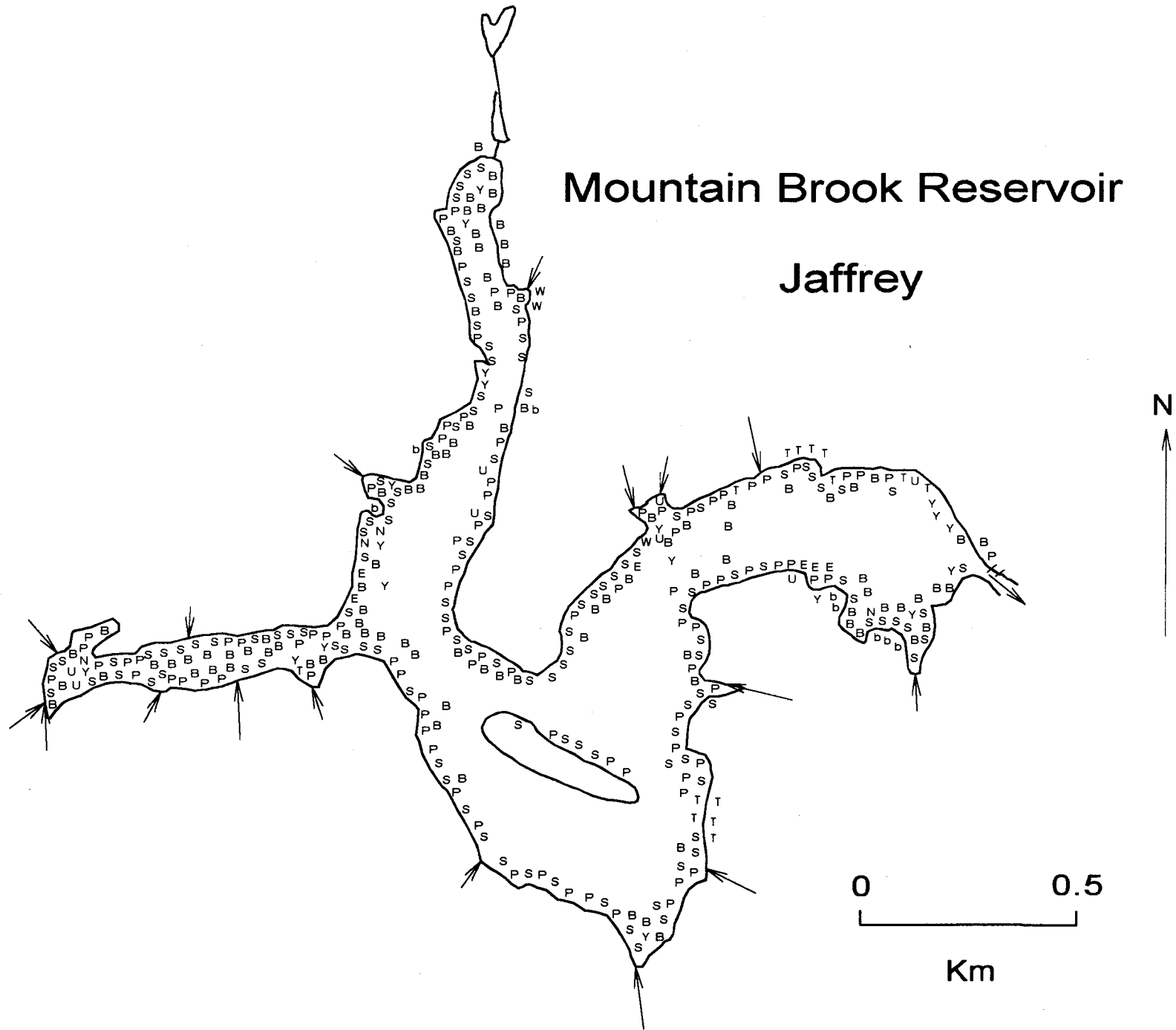
COMMENTS :

TIME: 1330

***Dissolved oxygen values are in mg/L**

Mountain Brook Reservoir

Jaffrey



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